

WHAT IS CLAIMED IS:

1. A semiconductor device, comprising:
a cylindrical substrate; and
at least one semiconductor chip formed on the
5 circumferential surface of said substrate, said
semiconductor chip being bent along the surface of said
substrate.

2. The semiconductor device according to claim 1,
wherein a plurality of semiconductor chips are mounted
10 to the outer circumferential surface of said substrate
a predetermined distance apart from each other in the
outer circumferential direction of said substrate.

3. The semiconductor device according to claim 1,
wherein a plurality of semiconductor chips are mounted
15 to the outer circumferential surface of said substrate
a predetermined distance apart from each other in the
longitudinal direction of said substrate.

4. The semiconductor device according to claim 1,
wherein said semiconductor chip is arranged to cover
20 the entire outer circumferential surface of said
substrate.

5. The semiconductor device according to claim 1,
wherein said semiconductor chip is arranged on the
inner circumferential surface of said substrate.

25 6. The semiconductor device according to claim 1,
wherein a plurality of semiconductor chips are arranged
on the inner circumferential surface of said substrate

a predetermined distance apart from each other in the inner circumferential direction of the substrate.

5 7. The semiconductor device according to claim 1, wherein a plurality of semiconductor chips are arranged on the inner circumferential surface of said substrate a predetermined distance apart from each other in the longitudinal direction of the substrate.

10 8. The semiconductor device according to claim 1, wherein said semiconductor chip is arranged over the entire inner circumferential surface of said substrate.

9. The semiconductor device according to claim 1, wherein said semiconductor chips are arranged on both the outer circumferential surface and the inner circumferential surface of said substrate.

15 10. The semiconductor device according to claim 1, wherein the outer circumferential surface of said substrate is sealed with a resin layer.

20 11. The semiconductor device according to claim 1, wherein a reinforcing body is arranged inside said cylindrical substrate.

25 12. The semiconductor device according to claim 1, wherein a plurality of terminals for connection are arranged in one edge portion in the longitudinal direction of said cylindrical substrate, and said terminals are electrically connected to said semiconductor chip.

13. A semiconductor device, comprising:

a cylindrical substrate; and
at least one stacked body formed on the
circumferential surface of said substrate, said stacked
body including a plurality of semiconductor chips
5 stacked one upon the other and being bent along the
surface of said substrate.

14. The semiconductor device according to
claim 13, wherein a plurality of said stacked bodies
are arranged a predetermined distance apart from each
10 other in the outer circumferential direction of said
substrate.

15. The semiconductor device according to
claim 13, wherein a plurality of said stacked bodies
are arranged a predetermined distance apart from each
15 other in the longitudinal direction of said substrate.

16. The semiconductor device according to
claim 13, wherein said stacked body is arranged to
cover the entire outer circumferential surface of said
substrate.

20 17. The semiconductor device according to
claim 13, wherein said stacked body is arranged on
the inner circumferential surface of said substrate.

18. The semiconductor device according to
claim 13, wherein a plurality of stacked bodies are
25 arranged on the inner circumferential surface of said
substrate a predetermined distance apart from each
other in the inner circumferential direction of the

substrate.

19. The semiconductor device according to claim 13, wherein a plurality of stacked bodies are arranged on the inner circumferential surface of said substrate a predetermined distance apart from each other in the longitudinal direction of the substrate.

20. The semiconductor device according to claim 13, wherein said stacked body is arranged over the entire inner circumferential surface of said substrate.

21. The semiconductor device according to claim 13, wherein said stacked bodies are arranged on both the outer circumferential surface and the inner circumferential surface of said substrate.

22. The semiconductor device according to claim 13, wherein the outer circumferential surface of said substrate is sealed with a resin layer.

23. The semiconductor device according to claim 13, wherein a plurality of terminals for connection are arranged in one edge portion in the longitudinal direction of said cylindrical substrate, and said terminals are electrically connected to said semiconductor chip.

24. A method of manufacturing a semiconductor device, comprising the steps of:

bending at least one semiconductor chip; and
mounting the bent semiconductor chip on at least

one region of the surface of a cylindrical substrate.

25. The method of manufacturing a semiconductor device according to claim 24, wherein said semiconductor chip is held by a holder having a curved surface in said bending step.

26. A method of manufacturing a semiconductor device, comprising the steps of:

mounting at least one semiconductor chip on at least a region of the surface of a flexible substrate; and

bending said substrate into a cylindrical form.